## 1.4 ORGANIZATION OF THIS REPORT

This CTSA is organized into two volumes: Volume I summarizes the methods and results of the CTSA; Volume II consists of appendices, including detailed chemical properties and methodology information, and comprehensive results of the risk characterization.

Volume I is organized as follows:

- Chapter 2 gives a detailed profile of the MHC use cluster, including process descriptions of the MHC technologies evaluated in the CTSA and the estimated concentrations of chemicals present in MHC chemical baths.
- Chapter 3 presents risk information, beginning with an assessment of the sources, nature, and quantity of selected environmental releases from MHC processes (Section 3.1); followed by an assessment of exposure to MHC chemicals (Section 3.2) and the potential human health and ecological hazards of MHC chemicals (Section 3.3). Section 3.4 presents quantitative risk characterization results, while Section 3.5 discusses process safety concerns.
- Chapter 4 presents competitiveness information, including Performance Demonstration results (Section 4.1), cost analysis results (Section 4.2), regulatory information (Section 4.3), and international market information (Section 4.4).
- Chapter 5 presents conservation information, including an analysis of water and other resource consumption rates (Section 5.1) and energy impacts (Section 5.2).
- Chapter 6 describes additional pollution prevention and control technology opportunities (Sections 6.1 and 6.2, respectively).
- Chapter 7 organizes data collected or developed throughout the CTSA in a manner that facilitates decision-making. Section 7.1 presents a summary of risk, competitiveness and conservation data. Section 7.2 assesses the social benefits and costs of implementing an alternative as compared to the baseline. Section 7.3 provides summary profiles for the baseline and each of the MHC alternatives.

## REFERENCES

- Kincaid, Lori E., Jed Meline and Gary Davis. 1996. *Cleaner Technologies Substitutes Assessment: A Methodology & Resource Guide*. EPA Office of Pollution Prevention and Toxics. Washington, D.C. EPA 744-R-95-002. December.
- Microelectronics and Computer Technology Corporation (MCC). 1993. Environmental Consciousness: A Strategic Competitiveness Issue for the Electronics and Computer Industry. March.
- Microelectronics and Computer Technology Corporation (MCC). 1994. *Electronics Industry Environmental Roadmap*. December.
- U.S. Environmental Protection Agency (EPA). 1995a. Printed Wiring Board Pollution
   Prevention and Control: Analysis of Survey Results. Design for the Environment Printed
   Wiring Board Project. EPA Office of Pollution Prevention and Toxics. Washington,
   D.C. EPA 744-R-95-006. September.
- U.S. Environmental Protection Agency (EPA). 1995b. "Printed Wiring Board Case Study 1: Pollution Prevention Work Practices." Pollution Prevention Information Clearinghouse (PPIC). Washington, D.C. EPA 744-F-95-004. July.
- U.S. Environmental Protection Agency (EPA). 1995c. "Printed Wiring Board Case Study 2: On-Site Etchant Regeneration." Pollution Prevention Information Clearinghouse (PPIC). Washington, D.C. EPA 744-F-95-005. July.
- U.S. Environmental Protection Agency (EPA). 1995d. *Federal Environmental Regulations Affecting the Electronics Industry*. EPA Office of Pollution Prevention and Toxics. Washington, D.C. EPA 744-B-95-001. September.
- U.S. Environmental Protection Agency (EPA). 1995e. *Printed Wiring Board Industry and Use Cluster Profile*. Design for the Environment Program Printed Wiring Board Project. EPA Office of Pollution Prevention and Toxics. Washington, D.C. EPA 744-R-95-005. September.
- U.S. Environmental Protection Agency (EPA). 1996a. "Printed Wiring Board Project:
  Opportunities for Acid Recovery and Management." Pollution Prevention Information
  Clearinghouse (PPIC). Washington, D.C. EPA 744-F-95-009. September.
- U.S. Environmental Protection Agency (EPA). 1996b. "Printed Wiring Board Project: Plasma Desmear: A Case Study." Pollution Prevention Information Clearinghouse (PPIC). Washington, D.C. EPA 744-F-96-003. September.
- U.S. Environmental Protection Agency (EPA). 1996c. "Printed Wiring Board Project: A Continuous-Flow System for Reusing Microetchant." Pollution Prevention Information Clearinghouse (PPIC). Washington, D.C. EPA 744-F-96-024. December.

U.S. Environmental Protection Agency (EPA). 1997. *Implementing Cleaner Technologies in the Printed Wiring Board Industry: Making Holes Conductive*. EPA Office of Pollution Prevention and Toxics. Washington, D.C. EPA 744-R-97-001. February.